

FINAL DRAFT

**Audit and Review Plan for
Plant Aging Management Programs
And Reviews**

**Nine Mile Point Nuclear Station,
Units 1 and 2
Docket Nos.: 50-220 and 50-410**

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Revision 1

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1. Introduction

By letter dated May 26, 2004 (ADAMS Accession Number ML041490213), Nine Mile Point Nuclear Station, LLC (NMPNS, the applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) its application for renewal of Operating License DPR-63 and Operating License NPF-69 for Nine Mile Point (NMP) Nuclear Station, Unit 1 and Unit 2, respectively. (ML041490223). The applicant requested renewal of these operating licenses for an additional 20 years beyond the 40 year current license term.

In support of the staff's safety review of the license renewal application (LRA) for NMP Units 1 and 2, the License Renewal and Environmental Impacts Program, Section B (RLEP-B), will lead a project team that will audit and review selected aging management reviews (AMRs) and associated aging management programs (AMPs) developed by the applicant to support the NMP LRA. This document is the RLEP-B audit and review plan for auditing and reviewing of plant aging management reviews and aging management programs for NMP LRA, Units 1 and 2. The project team will include both NRC staff and contractor personnel provided by Information Systems Laboratories, Inc. (ISL), RLEP-B's technical contractor. Appendix A of this audit and review plan lists the project team members.

The project team will audit and review its assigned AMPs and AMRs against the requirements of Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants"; the guidance provided in NUREG-1800, "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants" (SRP-LR), dated July 2001; the guidance provided in NUREG-1801, "Generic Aging Lessons Learned Report" (GALL Report), dated July 2001; and the RLEP-B audit and review plan. For the scope of work defined in this audit and review plan, the project team will determine that the applicant's aging management activities and programs will adequately manage the effects of aging on structures and components, so that their intended functions will be maintained consistent with the NMP current licensing basis (CLB) for the period of extended operation.

The project team will perform its work at NRC Headquarters, Rockville, Maryland; at ISL's offices in Rockville, Maryland; and at the applicant's offices in Oswego, NY and Crofton, MD. The project team will perform its work in accordance with the schedule established in Appendix B of this audit and review report. The project team will conduct a public exit meeting at the applicant's offices in Oswego, NY, after it completes its on-site work.

This audit and review plan includes the following information:

- C **Introduction and background** Summary of the license renewal requirements, as stated in the *Code of Federal Regulations*, and a summary of the documents that the project team will utilize to conduct the audit and review.
- C **Objectives** The project team's objectives for conducting the audit and review of the NMP LRA.
- C **Summary of Information Provided in License Renewal Application** Description of the information contained in the NMP LRA that is applicable to this audit and review.

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- C **Overview of the Audit, Review, and Documentation Procedure** Summary of the process the project team will follow to perform the audit and review of the NMP LRA that is within its scope of review.
- C **Planning, Audit, Review, and Documentation Procedure** The procedure that the project team will use to plan and schedule its work, to audit and review the NMP LRA information that is within its scope of review, and to document the results of its work.
- C **Appendices** Summary of the project team's supporting information. Appendix A lists audit and review project team members. Appendix B lists the audit and review schedule. Appendix C, "Aging Management Program Assignments" and Appendix D, "Aging Management Review Assignments," describe the project team's work assignments. Appendix E and Appendix F is worksheets template that each project team members will use to informally document the results of his/her audit and review. The application of these worksheets is described in detail in Section 6 of this audit and review plan. Appendix G is a list of the acronyms, abbreviations, and initialisms used in this audit and review plan.

2. Background

In 10 CFR 54.4, the scope of license renewal is defined as those structures, systems, and components (SSCs) (1) that are safety-related, (2) whose failure could affect safety-related functions, and (3) that are relied on to demonstrate compliance with the NRC's regulations for fire protection, environmental qualification (EQ), pressurized thermal shock (PTS), anticipated transients without scram (ATWS), and station blackout (SBO). An applicant for a renewed license must review all SSCs within the scope of license renewal to identify those structures and components (SCs) subject to an AMR. SCs subject to an AMR are those that perform an intended function without moving parts or without a change in configuration or properties (passive), and that are not subject to replacement based on qualified life or specified time period (long-lived). Pursuant to 10 CFR 54.21(a)(3), an applicant for a renewed license must demonstrate that the effects of aging will be managed in such a way that the intended function or functions of those SCs will be maintained, consistent with the CLB, for the period of extended operation. 10 CFR 54.21(d) requires that the applicant submit a supplement to the final safety analysis report (FSAR) that contains a summary description of the programs and activities that it credited to manage the effects of aging during the extended period of operation.

The SRP-LR provides staff guidance for reviewing applications for license renewal. The GALL Report is a technical basis document. It summarizes staff-approved AMPs for the aging management of a large number of SCs that are subject to an AMR. It also summarizes the aging management evaluations, programs, and activities acceptable to the NRC staff for managing aging of most of the SCs used in commercial nuclear power plants, and serves as a reference for both the applicant and staff reviewers to quickly identify those AMPs and activities that the staff has determined will provide adequate aging management during the extended period of operation. If an applicant commits to implementing these staff-approved AMPs, the time, effort, and resources needed to review an applicant's LRA will be greatly reduced, thereby improving the efficiency and effectiveness of the license renewal review process. The GALL Report identifies (1) systems, structures, and components, (2) component materials, (3) the environments to which the components are exposed, (4) the aging effects associated with the materials and environments, (5) the AMPs that are credited to manage the aging effects, and (6) recommendations for further evaluations by the applicant of aging effects and their management, for certain component types.

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The GALL Report is treated in the same manner as an approved topical report that is generically applicable. An applicant may reference the GALL Report in its LRA to demonstrate that its programs correspond to those that the staff reviewed and approved in the GALL Report. If the material presented in the LRA is consistent with the GALL Report and is applicable to the applicant's facility, the staff will accept the applicant's reference to the GALL Report. In making this determination, the staff considers whether the applicant has identified specific programs as described and evaluated in the GALL Report but the staff does not conduct a re-review of the substance of the matters described in the GALL Report. Rather, the staff determines that the applicant had verified that the approvals set forth in the GALL Report apply to its programs.

If an applicant takes credit for a GALL Report AMP, it is incumbent on the applicant to ensure that its AMP contains all the program elements of the referenced GALL Report AMP.¹ In addition, the conditions at the plant must be bounded by the conditions for which the GALL Report AMP was evaluated. The applicant must certify in its LRA that it completed the verifications and that they are documented on-site in an auditable form.

3. Objectives

The overall objective of the audit and review is to determine compliance with 10 CFR 54.21(a)(3). Therefore, the audit and review process helps to ensure that for each structure and component within the scope of the project team's review, the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.

The procedure for auditing and reviewing of the NMP LRA is described in Sections 5 and 6 of this audit and review plan. It is intended to accomplish the following objectives:

- C For NMP AMPs that the applicant claims that are consistent with the GALL Report, determination that the NMP AMPs contain the program elements of the referenced GALL Report AMP (for the seven program elements that are within the scope of review of the project team) and that the conditions at NMP are bounded by the conditions for which the GALL AMPs were evaluated.
- C For NMP AMPs that the applicant claims that are consistent with GALL AMPs with exceptions, determination that the NMP AMPs contain the program elements of the referenced GALL Report AMPs, the applicant has documented an acceptable technical basis for each exception, and the conditions at the NMP are bounded by the conditions for which the GALL Report AMPs were evaluated.
- C For NMP AMPs that the applicant claims that will be consistent with GALL Report AMPs after specified enhancements are implemented, determination that the NMP AMPs, with the enhancements, will be consistent with the referenced GALL AMPs, or are acceptable on the

¹ Table 1 of this plan shows the 10 program elements that are used to evaluate the adequacy of each aging management program. These program elements are presented in Branch Technical Position (BTP) RLSB-1, "Aging Management Review - Generic," in Appendix A of the SRP-LR, and are summarized in the GALL Report. The project team's scope of review includes seven of the 10 elements: 1 through 6, and 10. The Division of Inspection Program Management (DIPM), Office of Nuclear Reactor Regulation (NRR) will review program elements 7, "corrective actions;" 8, "confirmation process;" and 9, "administrative controls." Therefore, the project team will not review these three elements. The DIPM review will be documented in Section 3 of the license renewal safety evaluation report for the plant.

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basis of a technical review. In addition, determination that the applicant identified the enhancements as commitments in the Updated Final Safety Analysis Report (UFSAR) or other docketed correspondence.

- C For AMRs that the applicant claims that are consistent with the GALL Report, determination that these AMRs are consistent with the criteria of the GALL Report.
- C For AMR line items for which the GALL Report recommends further evaluation, determination that the applicant has addressed the further evaluation, and evaluating the AMRs in accordance with the SRP-LR.

4. Summary of Information Provided in the License Renewal Application

The NMP LRA closely follows the standard LRA format presented in NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule," Revision 3, April 2001. Section 3 of the NMP LRA provides the results of the aging management review for structures and components that the applicant identified as being subject to aging management review.

NMP LRA Table 3.0-1 provides descriptions of the mechanical, structural, and electrical service environments, respectively, used in the AMRs to determine the aging effects requiring management. NMP LRA Table 3.0-2 provides descriptions of the aging effects requiring management. Results of the AMRs are presented in two different types of tables. The applicant refers to these two types of tables as Table 1 and Table 2.

The first table type is a series of six tables labeled Table 3.X.1.A, where "X" is the system/component group number (see table below), "1" indicates it is a Table 1 type, and "A" indicates Unit 1. For example, in the reactor coolant system subsection of the NMP LRA Section 3, this is Table 3.1.1.A for Unit 1, and in the engineered safety features subsection of NMP LRA Section 3, this is Table 3.2.1.A for Unit 1. For Unit 2, the tables' labels remain the same, however, "A" is being replaced with "B," where "B" indicates Unit 2. For example, in the reactor coolant system subsection of the NMP LRA Section 3, this is Table 3.1.1.B, and in the engineered safety features subsection of NMP LRA Section 3, this is Table 3.2.1.B. In some cases, the letter "C" is used to indicate commodities.

X	Definition
1	Reactor Vessel, Internals, and Reactor Coolant Systems
2	Engineered Safety Features
3	Auxiliary Systems
4	Steam and Power Conversion Systems
5	Structures and Component Supports
6	Electrical and Instrumentation and Controls Systems

The second table type is a series of tables labeled Table 3.X.2.A-Y, where "X" is the system/component group number, "2" indicates it is a Table 2 type, "A" indicates Unit 1, and "Y" indicates the subgroup number within group "X." For example, within the "reactor coolant

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system” (group 1), the AMR results for the reactor pressure vessel (subgroup 1) are presented in the NMP Unit 1 LRA Table 3.1.2.A-1, and the results for the reactor vessel internals (subgroup 2) are presented in NMP LRA Table 3.1.2.A-2. Under the “engineered safety features system” (group 2), the emergency core cooling system (subgroup 1) results are presented in Table 3.2.2.A-1 of the NMP LRA, and the containment spray system (subgroup 2) is in Table 3.2.2.A-2 of the NMP Unit 1 LRA for Unit 1. For Unit 2, the table labels remain the same; however, “A” is replaced with “B,” where “B” indicates Unit 2.

The applicant compared the NMP AMR results with information set forth in the tables of the GALL Report and provided the results of these comparisons in two table types that correlate with the two table types described above.

NMP Tables 3.1.1.A through 3.6.1.A and 3.1.1.B through 3.6.1.B (Table 1 types) provide a summary comparison of how the NMP AMR results align with Tables 1 through 6 of the GALL Report, Volume 1. These NMP LRA tables are essentially the same as Tables 1 through 6 of the GALL Report, Volume 1, except that the “Type” column has been replaced by an “Item Number” column, the GALL Volume 2 Item Number column has been deleted, and a “Discussion” column has been added. The “Item Number” column provides a means to cross-reference between NMP LRA Table 3.X.2.A-Y and Table 3.X.2.B-Y (Table 2 types) and NMP LRA Table 3.X.1.A and Table 3.X.1.B (Table 1 type), respectively. The “Discussion” column includes further information. The following are examples of information that might be contained within the “Discussion” column:

- C Any “Further Evaluation Recommended” information or reference to the location of that information
- C The name of a plant-specific program being used
- C Exceptions to the GALL Report assumptions
- C A discussion of how the line item is consistent with the corresponding line item in the GALL Report, when it may not be intuitively obvious
- C A discussion of how the line item differs from the corresponding line item in the GALL Report, when it may appear to be consistent.

NMP LRA Table 2 types provide the detailed results of the AMRs for those SCs that are subject to an aging management review. There is a Table 2 for each subgroup within the six system/component groups. For example, the engineered safety features system group contains tables specific to emergency core cooling, containment spray, containment cooling, containment penetrations, and hydrogen control. Table 2 of the NMP LRA consists of the following nine columns.

- C *Component Type*. Column 1 identifies the component types that are subject to an AMR. The component types are listed in alphabetical order. In the structural tables, component types are sub-grouped by material.
- C *Intended Function*. Column 2 identifies the license renewal intended functions for the listed component types. Definitions and abbreviations of intended functions are listed in Table 2.0-1 in Section 2 of the NMP LRA.
- C *Material*. Column 3 lists the particular materials of construction for the component type being evaluated.

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- C *Environment*. Column 4 lists the environment to which the component types are exposed. Internal and external service environments are indicated. A description of these environments is provided in NMP LRA Table 3.0-1, Table 3.0-2, and Table 3.0-3 for mechanical, structural, and electrical components, respectively.
- C *Aging Effect Requiring Management*. Column 5 lists the aging effects identified as requiring management for the material and environment combinations of each component type.
- C *Aging Management Programs*. Column 6 lists the programs used to manage the aging effects requiring management.
- C *GALL Report (Vol. 2) Item*. Each combination of the following factors listed in LRA Table 2 is compared to the GALL Report to identify consistencies: component type, material, environment, aging effect requiring management, and aging management program. Column 7 documents identified consistencies by noting the appropriate GALL Report item number. If there is no corresponding item number in the GALL Report for a particular combination of factors, Column 7 is left blank.
- C *Table 1 Item*. Each combination of the following that has an identified GALL Report item number also has a Table 1 line item reference number: component type, material, environment, aging effect requiring management, and aging management program. Column 8 lists the corresponding line item from Table 1. If there is no corresponding item in the GALL Report (Volume 1), Column 8 is left blank.
- C *Notes*. Column 9 contains notes that are used to describe the degree of consistency with the line items in the GALL Report. Notes that use letter designations are standard notes based on the letter from A. Nelson, NEI, to P. T. Kuo, NRC, “U.S. Nuclear Industry’s Proposed Standard License Renewal Application Format Package, Request NRC Concurrence,” dated January 24, 2003 (ML030290201).² These standard notes are shown in Table 2 of this audit plan. Notes that use numeric designators are specific to NMP.

NMP LRA Table 2 contains the aging management review results and indicates whether the results correspond to line items in Volume 2 of the GALL Report. Correlations between the combination in NMP LRA Table 2 and a combination for a line item in Volume 2 of the GALL Report are identified by the GALL Report item number in Column 7. If Column 7 is blank, the applicant did not identify a corresponding combination in the GALL Report. If the applicant identified a GALL Report line item, the next column provides a reference to a Table 1 row number. This reference corresponds to the GALL Report, Volume 2, “roll-up” to the GALL Report, Volume 1, tables. Many of the GALL Report evaluations refer to plant-specific programs. In these cases, the applicant considers the NMP evaluation to be consistent with the GALL Report if the other elements are consistent. Any appropriate AMP is considered to be a match to the GALL program for line items referring to a plant-specific program.

² The staff concurred with the standardized format for license renewal applications by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

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5. Overview of Audit, Review, and Documentation Procedure

The project team will follow the procedure specified in Section 6 of this audit and review plan to perform its audits and reviews and to document the results. The process covered by the procedure is summarized below.

5.1 Aging Management Programs

Table 1 of this audit and review plan summarizes the program elements that comprise an aging management program. Of these 10 elements, elements 1 through 6, and element 10 are within the project team's scope of review.³ For the NMP AMPs for which the applicant claimed consistency with the GALL Report AMPs, the project team will review the NMP AMP descriptions and compare program elements 1 through 6, and program element 10, to the corresponding program elements of the GALL Report AMPs. The project team will determine that the NMP AMPs contain the program elements of the referenced GALL Report program and that the conditions at the NMP are bounded by the conditions for which the GALL Report program was evaluated.

For each NMP AMP that has an exception or an enhancement, the project team will determine whether it is acceptable, and whether the NMP AMP, as modified by the applicant, will adequately manage the aging effects for which it is credited. If the project team identifies differences between the NMP AMP credited by the applicant and the GALL Report AMP, which the applicant did not address in the NMP LRA, the project team will review the difference to determine whether the NMP AMP, as modified by the difference, will adequately manage the aging effects for which it is credited.

For those NMP AMPs that are not included in the GALL Report (i.e., plant-specific AMPs), the AMPs are being refer to the NRR Division of Engineering (DE) for review.

5.2 Aging Management Reviews

The AMRs in the GALL Report fall into two broad categories: (1) those that the GALL Report concludes are adequate to manage aging of the components referenced in the GALL Report, and (2) those for which the GALL Report concludes that aging management is adequate, but further evaluation is recommended for certain aspects of the aging management process. For its AMR reviews, the project team will determine whether the AMRs reported by the applicant to be consistent with the GALL Report are indeed consistent with the GALL Report. For component groups evaluated in the GALL Report for which the applicant claimed consistency with the GALL Report, and for which the GALL Report recommends further evaluation, the project team will review the applicant's evaluation to determine if it adequately addressed the issues for which the GALL Report recommended further evaluation.

5.3 NRC-Approved Precedents

No NRC-approved precedents were used in the NMP LRA.

5.4 UFSAR Supplement Review

³ As noted in Section 2 of this plan, DIPM will review program elements 7, 8, and 9. The results of these reviews will be documented in Section 3 of the plant safety evaluation report.

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Consistent with the SRP-LR, for the AMRs and associated AMPs that it will review, the project team will review the UFSAR supplement that summarizes the applicant's programs and activities for managing the effects of aging for the extended period of operation. The project team will also review any commitments associated with its programs and activities made by the applicant and determine that they are acceptable for the stated purpose.

5.5 Documents Reviewed by the Project Team

In performing its work, the project team will rely heavily on the NMP LRA, this audit and review plan, the SRP-LR, and the GALL Report. The project team will also examine the NMP AMPs and AMRs basis documents (catalogs of the documentation used by the applicant to develop or justify its AMPs and AMRs), and other applicant documents, including selected implementing procedures, to determine that the applicant's activities and programs will adequately manage the effects of aging on structures and components.

5.6 Public Exit Meeting

After it completes its audits and reviews, the project team will hold a public exit meeting to discuss the scope and results of its audits and reviews.

5.7 Documents Prepared by the Project Team

The project team will prepare an audit and review plan, worksheets, work packages, requests for additional information (RAIs), an audit and review report, and safety evaluation report (SER) input. The project team will also prepare questions during site visits and will track the applicant's responses to these questions.

5.7.1 Audit and Review Plan

The project team leader will prepare a plant-specific audit and review plan as described herein.

5.7.2 Worksheets

Each project team member will informally document the results of his or her work on a variety of worksheets. The worksheets template are shown in Appendix E, "Consistent with GALL Report AMP Audit/Review Worksheet"; and Appendix F, "Aging Management Review Worksheets." The use of the worksheets is described in Section 6 of this audit and review plan.

5.7.3 Questions

As specified in Section 6 of this audit and review plan, the project team members will ask the applicant questions during on-site audits, as appropriate, to facilitate its audit and review activities. The project team will also track the applicant's answers to these questions.

5.7.4 Work Packages

After each on-site visit, the project team leader, in conjunction with the project manager, will assemble work packages for any work that the project team refers to NRR DE for review. Each work package will include a work request and any applicable background information associated with the review item that was gathered.

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5.7.5 Requests for Additional Information

The review process described in this audit and review plan is structured to resolve as many questions as possible during the on-site visits. As examples, the on-site visits are used to obtain clarifications about the NMP LRA and explanations as to where certain information may be found in the NMP LRA or its associated documents. Nevertheless, there may be occasions where an RAI is appropriate to obtain additional information to support its review. The need for RAIs will be determined by the project team leader during the on-site visits through discussions with the individual project team members. When the project team leader determines that an RAI is needed, the project team member, who is responsible for the area of review, will prepare the RAI. RAIs will include the technical and regulatory basis for requesting the additional information.

After the NRC receives a response to an RAI from the applicant, the project team leader will provide the response to the project team member who prepared the RAI. The project team member will review the response and determine if it resolves the issue. The project team member will document the disposition of the RAI in the audit and review report and in the SER input. If the audit and review report was issued before the applicant submitted its response to the RAI, the review and evaluation of the response will be documented in the SER.

5.7.6 Audit and Review Report

The project team will document the results of its work in an audit and review report. Each project team member will be responsible for preparing his or her report input of the assigned work. The report input will then be forwarded to the contractor project team leader for integration. The project team will prepare its report as described in Section 6.4.1 of this audit and review plan and the latest version of the *RLEP-B Guidelines for Preparing Audit and Review Reports*.

5.7.7 Safety Evaluation Report Input

The project team will prepare SER input, based on the audit and review report, as described in Section 6.4.2 of this audit plan.

6. Planning, Audit, Review, and Documentation Procedure

This section of the audit and review plan contains detailed procedures that the project team will follow to plan, perform, and document its work.

6.1 Planning Activities

6.1.1 Schedule for Key Milestones and Activities

The project team leader will establish the schedule for the key milestones and activities, consistent with the overall schedule for making the licensing decision. Key milestones and activities include, as a minimum:

- A. receiving the NMP LRA from the applicant
- B. receiving work split tables from the project manager
- C. making individual work assignments
- D. training project team members

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- E. holding the project team kickoff meeting
- F. preparing the audit and review plan
- G. scheduling on-site visits
- H. scheduling in-office review periods
- I. preparing questions
- J. preparing RAIs
- K. preparing draft and final audit and review report
- L. preparing draft and final SER input

On-site visits will be scheduled on the basis of discussions between the project team leader, the NRC license renewal project manager, and the applicant.

Appendix B of this audit and review plan contains the target schedule for the key milestones and activities.

6.1.2 Work Assignments

The technical contractor (ISL) will propose project team member work assignments to the NRC project team leader. The NRC project team leader will approve all work assignments. After the audit and review plan is issued, the project team leader may reassign work as necessary.

ISL will develop assignment tables that show which project team member will review a particular AMP and AMR. Appendix A of this audit and review plan lists the project team members. Appendix C and Appendix D shows the project team member assignments for the AMPs and AMRs, respectively.

6.1.3 Training and Preparation

The training and preparation will include the following:

1. A description of the audit and review process.
2. An overview of audit and review related documentation.
 - A. the GALL Report
 - B. SRP-LR
 - C. Interim Staff Guidance (ISG)
 - D. NMP LRA AMPs
 - E. NMP LRA AMRs
 - F. basis documents (catalogues of information assembled by the applicant to demonstrate the bases for its programs and activities)
 - G. implementation procedures
 - H. operating experience reports
 - I. RAIs, previously issued audit and review reports, and SERs
 - J. NMP UFSAR
3. Protocol for interfacing with the applicant.
4. Administrative issues such as travel, control of documentation, work hours, etc.

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5. Process and guideline for preparing questions, RAIs, the audit and review report, and SER input.
6. Process and guideline for interfacing with DE technical reviewers.

6.2 Aging Management Program Audits and Reviews

6.2.1 Types of AMPs

There are two types of AMPs: those that the applicant states are consistent with the GALL Report AMP, and those that are plant-specific. The process for auditing and reviewing both types of AMPs is presented in the following sections of this audit plan.

6.2.2 Scope of AMP Elements to be Audited and Reviewed

Table 1 of this audit and review plan shows the 10 program elements that are used to evaluate the adequacy of each aging management program. These program elements are presented in Branch Technical Position (BTP) RLSB-1, “Aging Management Review - Generic,” in Appendix A of the SRP-LR, and are summarized in the GALL Report. The project team’s scope of review includes seven of the 10 elements: 1 through 6, and 10.⁴

The program elements audited or reviewed is the same for AMPs that are consistent with the GALL Report and plant-specific AMPs.

6.2.3 NMP AMPs that are Consistent with the GALL Report

Figure 1, “Audit of AMPs That Are Consistent with the GALL Report,” is the process flowchart that shows the activities and decisions used by the project team to review and audit each NMP AMP that the applicant claims to be consistent with the GALL Report.

Preparation

- A. For the NMP AMP being reviewed, identify the corresponding GALL Report AMP.
- B. Review the associated GALL Report AMP and identify those elements that will be audited.
- C. Identify the documents needed to perform the audit. These may include, but are not limited to, the following:
 - (1) the GALL Report
 - (2) SRP-LR
 - (3) ISGs
 - (4) RAIs, previously issued audit and review reports, and SERs
 - (5) NMP LRA
 - (6) basis documents
 - (7) implementation procedures
 - (8) operating experience reports (plant-specific and industry)
 - (9) NMP UFSAR

⁴ DIPM will review program elements 7, 8, and 9. The DIPM review will be documented in Section 3 of the plant safety evaluation report.

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Audit/Review

- A. Determine that the seven NMP AMP elements are consistent with the corresponding elements of the GALL Report AMP by answering the following questions and then following the process shown in Figure 1.
 - (1) Did the applicant identify any exceptions to the GALL Report AMP?
 - (2) Are the elements consistent with the GALL Report AMP?
- B. If either of the above questions results in the identification of an exception or a difference to the GALL Report AMP, determine whether it is acceptable on the basis of an adequate technical justification.
- C. If an acceptable basis exists for an exception or difference, document the basis in the worksheet and later in the audit and review report and the SER input.
- D. Review the industry and plant-specific operating experience associated with the NMP AMP. This is an area of review emphasis. The operating experience requires review to identify aging effects requiring management that are not identified by the industry guidance documents (such as EPRI tools) and to determine the effectiveness of the aging management programs. The project team members should consider the industry guidance when assessing operating experience and formulating questions for the applicant. The industry guidance (from NEI 95-10, Revision 3) is as follows:
 - (1) Operating Experience - Aging Effects Requiring Management. A plant-specific operating experience review should assess the operating and maintenance history. A review of the prior 5 to 10 years of operating and maintenance history should be sufficient. The results of the review should determine consistency with documented industry operating experience. Differences with previously documented industry experience such as new aging effects or lack of aging effects allow consideration of plant-specific aging management requirements.
 - (2) Operating Experience - Aging Management Programs. Plant-specific operating experience with existing programs should be considered. The operating experience of aging management programs, including past corrective actions resulting in program enhancements or additional programs, should be considered. The review should provide objective evidence to support the conclusion that the effects of aging will be managed so that the intended function(s) will be maintained during the extended period of operation. Guidance for reviewing industry operating experience is presented in BTP RLSB-1 in Appendix A.1 of the Branch Technical Positions in NUREG-1800.
 - (3) Industry Operating Experience. Industry operating experience and its applicability should be assessed to determine whether it changes plant-specific determinations. NUREG-1801 is based upon industry operating experience prior to its date of issue. Operating experience after the issue date of NUREG-1801 should be evaluated and documented as part of the aging management review. In particular, generic communications such as a bulleting or an information notice should be evaluated for impact upon the AMP. The evaluation should check for new aging effects or a new component or location experiencing an already identified aging effect.

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- E. If it is necessary to ask the applicant a question to clarify the basis for accepting a program element, or an exception or a difference to the GALL Report AMP, follow the logic process shown in Figure 1.
- F. If it is necessary for the applicant to submit additional information to support the basis for accepting a program element, an exception, or a difference, the applicant may agree to voluntarily submit the required information as a supplement to its LRA. If not, the NRC may issue an RAI to obtain the information.

AMP audit worksheets

Document the audits/reviews using the worksheet provided in Appendix E, “Consistent with GALL Report AMP Audit/Review Worksheet.”

6.2.4 Plant-Specific AMPs

For Nine Mile Point, the plant-specific AMPs are being reviewed by NRR DE.

6.3 AMR Audits and Reviews

There are two types of AMRs: those that the applicant claims are consistent with the GALL Report, and those that are plant-specific. Audit and review for AMRs that are consistent with the GALL Report are discussed below. For Nine Mile Point, the applicant claims that there are no AMRs that are plant-specific.

6.3.1 Plant AMRs that are Consistent with the GALL Report

Figure 2, “Review of AMRs that are Consistent with the GALL Report,” is the process flowchart that shows the activities and decisions used to audit/review each AMR that the applicant claims is consistent with the GALL Report.

Preparation

- A. For the NMP AMRs that the applicant claims are consistent with the GALL Report, identify the corresponding AMRs in the GALL Report.
- B. Review the associated GALL AMRs and identify those line items that will be audited and reviewed in conjunction with each NMP AMRs.
- C. Identify the documents needed to perform the review. These may include, but are not limited to, the following:
 - (1) the GALL Report
 - (2) SRP-LR
 - (3) ISGs
 - (4) RAIs, previously issued audit and review reports, and SERs
 - (5) NMP LRA
 - (6) basis documents
 - (7) implementation procedures
 - (8) operating experience reports (plant-specific and industry)
 - (9) NMP UFSAR

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Audit/review

- A. Each NMP AMR line item is coded with a letter which represents a note designation.⁵ The letter notes are described in Table 2 of this audit and review plan. Notes that use numeric designators are plant-specific. The note codes A through E are classified as “consistent with the GALL Report,” and will be reviewed in accordance with the guidance provided in this audit and plan.
- B. The AMR review involves determination that the applicant has satisfied the requirements of 10 CFR 54.21(a)(3). This requirement states that, for “each structure and component [within the scope of license renewal], demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the extended period of operation.”
- C. Determine compliance by following the process shown in Figure 2. The process is summarized below:
 - (1) For each AMR line item, perform the review associated with the letter note (A through E) assigned to the AMR line item. Specifically, determine if the AMR is consistent with the GALL Report for the elements associated with its note.
 - (2) If Note A applies, and the applicant uses a plant-specific AMP⁶, determine if the component is within the scope of the cited NMP AMP. If the component is within the scope of the NMP AMP, the AMR line item is acceptable. If not acceptable, go to Step (7) below.
 - (3) If Note B applies, review the NMP LRA exceptions and document the basis for acceptance in the worksheet, and later in the audit and review report. If not acceptable, go to Step (7) below.
 - (4) If Note C or D applies, determine if the component type is acceptable for the material, environment, and aging effect. If Note D applies, also review the NMP LRA exceptions and document the basis for acceptance in the worksheet, and later in the audit and review report. If not acceptable, go to Step (7) below.
 - (5) If Note E applies, review the AMP audit report findings to determine if the scope of the alternate AMP envelopes the AMR line item being reviewed and satisfies 10 CFR 54.21(a)(3). If it does not, go to Step (7) below.
 - (6) Review the corresponding NMP LRA Table 3.X.1.A or Table 3.X.1.B entry that is referenced in NMP LRA Table 3.X.2.A-Y or Table 3.X.2.B-Y. If applicable, determine whether the applicant’s “Further Evaluation Recommended” response provided in NMP LRA Table 3.X.1A or Table 3.X.1B is enveloped by Section 3.X.2.2.Z of the SRP-LR where “Z” is the appropriate Table 1 line item number. If not, go to Step (7) below. If the NMP LRA section does not meet the acceptance criteria of Appendix A of the SRP-LR, go to Step (7) below.

⁵ The AMR line item letter notes are based on a letter from A. Nelson, NEI, to P. T. Kuo, NRC, “U.S. Nuclear Industry’s Proposed Standard License Renewal Application Format Package, Request NRC Concurrence,” dated January 24, 2003 (ML030290201). The staff concurred in the format of the standardized format for LRAs by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

⁶ Some GALL AMRs reference the use of a plant-specific AMP. In such cases the AMR audit requires the project team member to determine that the plant-specific AMP is appropriate to manage the aging effects during the period of extended operation.

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- (7) If during the review a difference is identified, prepare a question to the applicant, in order to obtain clarification.
 - (a) Review the applicant's response to the question. If it appears acceptable, re-start the audit/review for the AMR line item from Step (1) above.
 - (b) If the applicant's response does not resolve the question or issue, prepare an additional question to obtain the information needed to achieve resolution. Review the applicant's response to the second question. If it appears acceptable, re-start the audit/review for the AMR line item from Step (1) above.
 - (c) If it is necessary for the applicant to submit additional information to resolve a question or an issue or to support a basis or conclusion, the applicant may submit the information as a supplement to its LRA or the NRC may issue an RAI to obtain the information. The project team leader should be consulted if docketed information may be needed.

AMR audit/review worksheets

Document the audits/reviews of NMP AMRs using the worksheet provided in Appendix F, "Aging Management Review Worksheets."

6.3.2 AMRs Based on NRC-Approved Precedents

For Nine Mile Point, the applicant claims that there are no AMRs that are plant-specific.

6.4 Audit and Safety Review Documentation

As noted in Section 5.7 of this audit and review plan, the project team will prepare an audit and review plan, worksheets, work packages, requests for additional information, an audit and review report, and an SER input. This section of the audit plan addresses the preparation of the audit and review report and the SER input.

6.4.1 Audit and Review Report

1. Format and content of the audit and review report. The report should include the following:
 - A. Cover page
 - B. Table of Contents
 - C. Section 1, Introduction
 - D. Section 2, Background
 - E. Section 3, Summary of Information in the License Renewal Application
 - F. Section 4, Audit and Review Scope
 - G. Section 5, Audit and Review Process
 - H. Section 6, Exit Meeting
 - I. Section 7, Audit and Review Results
 - (1) Section 7.1, Aging Management Programs
 - (2) Section 7.2, Aging Management Reviews for Nine Mile Point Unit 1
 - (3) Section 7.3, Aging Management Reviews for Nine Mile Point Unit 2
 - J. Attachment 1, Abbreviations, Acronyms and Initialisms

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- K. Attachment 2, Project Team and Applicant Personnel
 - L. Attachment 3, Elements of an Aging Management Program for License Renewal
 - M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items
 - N. Attachment 5, List of Documents Reviewed
 - O. Attachment 6, List of Commitments
2. The following paragraphs describe, in general, the type of information and the level of detail necessary for each report section.
- A. Cover page that identifies the following:
 - (1) Name of the plant and units
 - (2) Docket number of the plants
 - (3) Organization preparing the report
 - (4) Contract number under which the work was performed
 - (5) Acknowledgement that the report was prepared for the License Renewal and Environmental Impacts Program, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation
 - (6) Date of the report
 - B. Table of Contents.
 - C. Section 1, Introduction. This section of the report should provide an overview of the audit and review conducted by the project team. It should also list key audit and review activities, including site visits-and the organizations supporting the audit and review. This information should be taken largely from the audit and review plan.
 - D. Section 2, Background. This section of the report should include a summary of the license renewal requirements as stated in the Code of Federal Regulations and a summary of the documents that the project team used to carry out the audit and review. This information should be taken largely from the audit and review plan.
 - E. Section 3, Summary of Information in the License Renewal Application. This section of the report should include a description of the information contained in the license renewal application that is applicable to the audit and review. This information should be taken largely from the audit and review plan.
 - F. Section 4, Audit and Review Scope. This section of the report should indicate that the AMRs and associated AMPs that the project team reviewed are identified in the audit and review plan. It should also include a general statement of the types and numbers of AMRs and AMPs that the project team audited and reviewed. This section of the report is largely boilerplate. The boilerplate text should be taken from a previously published report and revised to match the plant that is the subject of the audit and review report.

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- G. Section 5, Audit and Review Process. This section of the report should state that the audit and review was performed in accordance with the processes defined in the audit and review plan and should summarize the audit and review process for AMPs, AMRs, and the UFSAR supplement. This section of the report (and its subsections) is largely boiler plate. The boilerplate text should be taken from a previously published report and revised to match the plant that is the subject of the audit and review report. This section of the report should include the following subsections.
- (1) 5.1 AMPs Consistent With the GALL Report
 - (2) 5.2 AMRs in the GALL Report
 - (3) 5.3 NRC-Approved Precedents
 - (4) 5.4 UFSAR Supplement
 - (5) 5.5 Documents Reviewed by the Project Team
 - (6) 5.6 Commitments to be Included in the Safety Evaluation Report
- H. Section 6, Exit Meeting. This section should include an acknowledgement of and a brief summary of the public exit meeting.
- I. Section 7, Audit and Review Results. This section of the report contains the main body of the report. The three subsections, 7.1, “Aging Management Programs,” 7.2, “Aging Management Reviews for Nine Mile Point Unit 1,” and 7.3. “Aging Management Reviews for Nine Mile Point Unit 2, contain the project team’s documentation of the results of its audits and reviews of the AMPs and AMRs. It should include:
- (1) Section 7.1 “Aging Management Programs,” containing:
 - (a) AMPs consistent with the GALL Report. The project team’s audit and review of each NMP AMP that the applicant identified as consistent with the GALL Report should be documented in the report. Each AMP should have an individual subsection in the report that includes the following:
 - (i) A subsection (e.g., 7.1.X, NMP AMP Name (AMP Number)) that identifies the NMP AMP name and number and the section of the NMP LRA (number and title) that includes the AMP.
 - (ii) A subsection (e.g., 7.1.X.1, Program Description) that describes the NMP AMP.
 - (iii) A subsection (e.g., 7.1.X.2, Consistency with the GALL Report) that describes the NMP AMP consistency to the GALL Report AMP, the documents reviewed, and the applicant staff interviewed.
 - (iv) A subsection (e.g., 7.1.X.3, Exceptions to the GALL Report) that lists any exceptions to the GALL Report AMP, a restatement of the GALL Report AMP program element criteria that apply to the exception, and an evaluation that clearly explains why any exceptions (identified by either the applicant or the project team) to the GALL Report AMP are acceptable.
 - (v) A subsection (e.g., 7.1.X.4, Enhancements) that lists any enhancements to the GALL Report AMP, a restatement of the GALL Report AMP program element criteria that apply to the enhancement,

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and an evaluation that clearly explains why any enhancements to the NMP AMP are acceptable.

- (vi) A subsection (e.g., 7.1.X.5, Operating Experience) that documents the project team's review of the plant specific and industry operating experience associated with the AMP.
 - (vii) A subsection (e.g., 7.1.X.6, UFSAR Supplement) that documents the project team's review of the adequacy of the applicant's commitment to revise the NMP UFSAR.
 - (viii) A subsection (e.g., 7.1.X.7, Evaluation) that documents the project team's evaluation and basis for concluding that the NMP AMP is consistent with the GALL Report AMP. The evaluation should address any amendments or supplements to its LRA. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution. The evaluation should also address any RAIs. If an RAI was issued concerning the AMP, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant submitted a response, include the date and the ADAMS accession number and state whether or not the RAI resolved the issue. If so, document the basis for its acceptance.
 - (ix) A subsection (e.g., 7.1.X.8, Conclusions) that documents the project team's conclusions regarding the AMP.
- (2) Section 7.2, "Aging Management Reviews for Nine Mile Point Unit 1," and Section 7.3, "Aging Management Reviews for Nine Mile Point Unit 2," of the report should include the following information.
- (a) A summary of the documents that the project team reviewed to perform the audit and review, i.e., the NMP LRA, the SRP-LR, and the applicant's basis documents.
 - (b) A summary review of the AMR notes used by the applicant to classify the AMR line items used in the NMP LRA Tables 3.X.2.A-Y for Unit 1 and NMP LRA Table 3.X.2.B-Y for Unit 2.
 - (c) The basis for accepting any exceptions to GALL AMRs that were identified by the applicant or the project team reviewer.
 - (d) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
 - (e) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
 - (f) An introductory section for each NMP LRA Section 3.X that contains the NMP LRA section reviewed and a summary of the type of information

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provided in the section of the NMP LRA reviewed, including a listing of the AMPs reviewed for this NMP LRA section.

- (g) AMRs consistent with the GALL Report for which no further evaluation is recommended. This section shall include the following:
 - (i) The project team will document information on AMRs consistent with the GALL Report for which no further evaluation is required only if it had an audit finding that resulted in an open item requiring a docketed response from the applicant or an RAI.
 - (ii) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
 - (iii) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
 - (iv) An evaluation to determine that:
 - (1) The applicant identified the applicable aging effects.
 - (2) The applicant defined the appropriate combination of materials and environments.
 - (3) The applicant specified acceptable AMPs.
 - (v) A conclusion stating that, if appropriate, the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.
- (h) AMRs consistent with the GALL Report for which further evaluation is required. This section of the report should include:
 - (i) A subsection for each of the NMP LRA Table 3.X.1.A and Table 3.X.1.B entries containing the applicant's further evaluations of AMRs for which further evaluation is recommended.
 - (ii) For each NMP LRA Table 3.X.1.A and 3.X.1.B entry containing the applicant's further evaluations, the following:
 - (1) A statement that the project team audited the applicant's further evaluations against the criteria contained in Section 3.X.2.2.Y of the SRP-LR.
 - (2) The SRP-LR Section 3.X.2.2.Y criteria.
 - (3) The basis for concluding that the applicant's evaluation of the aging effect satisfies the criteria contained in Section 3.X.2.2.Y of the SRP-LR.
 - (4) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a

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supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.

- (5) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
 - (6) A concluding paragraph summarizing the project team evaluation of the particular aging effect.
- J. Attachment 1, Abbreviations, Acronyms, and Initialisms. This attachment should identify the abbreviations, acronyms, and initialisms used in the audit and review report.
- K. Attachment 2, Project Team and Applicant Personnel. This attachment should identify the project team members, the key applicant personnel who were consulted during the audit and review, and the individuals that attended the exit meeting.
- L. Attachment 3, Elements of an Aging Management Program for License Renewal. This attachment is a standard table of the 10 program elements that are used to evaluate the adequacy of each AMP as presented in Branch Technical Position (BTP) RLSB-1, "Aging Management Review - Generic," in Appendix A of the SRP-LR.
- M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items.
- (1) Include a list of the formal RAIs that were issued as a result of the audit/review and a summary of the disposition of the applicant's response to each RAI.
 - (2) Include a list of issues that the applicant agreed to formally address through a supplement or an amendment to its LRA and a summary of the disposition of each issue.
 - (3) For each RAI and LRA supplement, identify the applicable AMP or AMR.
 - (4) Possible dispositions could include open, closed, or confirmatory items. The genesis of each RAI and LRA supplement, as well as their dispositions should be clearly documented in conjunction with the audit and review results in the applicable AMP or AMR sections of the report.
- N. Attachment 5, List of Documents Reviewed. This attachment should list all of the documents reviewed by the project team to support its AMP and AMR audits and reviews and to support its evaluations and conclusions.
- (1) Indicate which documents were reviewed for each AMP or AMR section.

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- (2) Include both docketed documents (e.g., the license renewal application) and non-docketed documents (e.g., basis documents, condition reports, and implementing procedures).
 - (3) Include both licensee-controlled documents (e.g., basis documents, condition reports, and implementing procedures) and other documents (e.g., topical reports and industry codes and standards).
- O. Attachment 6, List of Commitments. This attachment should list and summarize all commitments made by the applicant that were reviewed by the project team, including any commitments that the applicant made in response to the project team's audit and review. This information can be subsequently excerpted for the SER report.

6.4.2 Safety Evaluation Report Input

1. General guidance

- A. Each project team member should prepare the SER input for the AMP and AMR audits and reviews that he or she performed. The lead technical contractor shall collect, assemble, and prepare the complete SER input.
- B. In general, the data and information needed to prepare the SER input should be available in the project team's audit and review report and the project team member's worksheets.
- C. SER inputs are to be prepared for:
 - (1) each AMP that was determined to be consistent with the GALL Report, which has no exceptions or enhancements.
 - (2) each AMP that was determined to be consistent with the GALL Report, which has exceptions (identified by either the applicant or the project team) or enhancements.
 - (3) AMRs that are consistent with the GALL Report
 - (4) project team AMR review results⁷
- D. The SER input should contain the following sections. (Note: The following section numbers (3. through 3.X.3) are based on the numbering system for the SER input. They are not a continuation of the numbering convention used throughout this audit plan.)

- 3. Aging Management Review Results
 - 3.0 Applicant's Use of the Generic Aging Lessons Learned Report
 - 3.0.1 Format of the NMP LRA
 - 3.0.2 Staff's Review Process
 - 3.0.2.1 AMRs in the GALL Report
 - 3.0.2.2 NRC-Approved Precedents
 - 3.0.2.3 UFSAR Supplement
 - 3.0.2.4 Documentation and Documents Reviewed
 - 3.0.3 Aging Management Programs

⁷ AMRs that are not consistent with the GALL Report.

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- 3.0.3.1 AMPs that are Consistent With the GALL Report
 - 3.0.3.2 AMPs that are Consistent With GALL Report With Exceptions or Enhancements
 - 3.0.4 Quality Assurance Program Attributes Integral to Aging Management Programs
 - 3.X.⁸ Aging Management of _____
 - 3.X.1. Summary of Technical Information in the Application
 - 3.X.2. Staff Evaluation
 - 3.X.2.1. Aging Management Evaluations that are Consistent with the GALL Report, for Which Further Evaluation is Not Required
 - 3.X.2.2. Aging Management Evaluations that are Consistent with the GALL Report, for Which Further Evaluation is Recommended
 - 3.X.3 Conclusion
- E. For each AMP audited/reviewed by the project team, the SER shall include a discussion of the project team's review of the operating experience program element.
- F. If the applicant submitted an amendment or a supplement to its LRA that is associated with the project team's audit or review activities, document the submittal (include the date and ADAMS accession number) and explain the issue that the submittal resolved and discuss the basis for the resolution.
- G. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant response has been received and accepted. If the response was acceptable, identify the submittal (including the date and the ADAMS accession number) that provided the response and document the basis for its acceptance.
- H. Issues (e.g., RAIs) that have not been resolved by the applicant at the time the SER input is prepared should be identified as open items.

2. SER input

- A. For AMPs determined to be consistent with the GALL Report, without exceptions, include the AMP title, the NMP AMP paragraph number, and a discussion of the basis for concluding that the UFSAR update (Appendix A of the NMP LRA) is acceptable. This SER input documents that the AMP is consistent with the GALL Report.
- B. For AMPs determined to be consistent with the GALL Report, with exceptions or enhancement, the SER input should include a statement that the audit found the AMP consistent with the GALL Report and that any applicant-identified exceptions to the GALL Report were found technically acceptable to manage the aging effect during the period of extended operation. The SER input should identify the

⁸ The LRA AMR results are broken down into six sections and address the following system/structure groups: (1) Section 3.1, reactor vessel, internals and reactor coolant system, (2) Section 3.2, engineering safety features systems, (3) Section 3.3, auxiliary systems, (4) Section 3.4, steam power and conversion systems, (5) Section 3.5, structures and component supports, (6) Section 3.6, electrical and instrumentation and controls.

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exceptions and provide the basis for acceptance. The SER input will also address the UFSAR supplement, and document the basis for concluding that it is acceptable.

- C. For plant-specific AMPs, the SER input should document the basis for accepting each of the seven elements reviewed by the project team. The SER input should also include a discussion concerning the adequacy of the UFSAR supplement.
- D. For aging management evaluations that are consistent with the GALL Report,⁹ the SER input should include the following:
 - (1) Identify the NMP LRA section reviewed
 - (2) A summary of the type of information provided in the section of the NMP LRA reviewed, including a listing of the AMPs reviewed.
 - (3) Identify the NMP LRA Tables 3.X.2.A-Y or Tables 3.X.2.B-Y reviewed.
 - (4) A summary review of the AMR Notes A through E used to classify the AMR line items used in these tables.
 - (5) A brief summary of what the staff (project team) reviewed to perform the audit, i.e., NMP LRA and applicant basis documents and other implementation documents. Reference the appendix that lists the details of the documents reviewed.
 - (6) The bases for accepting any exceptions to GALL AMRs that were identified by the applicant or the project team member.
 - (7) A finding that verifies that:
 - (a) the applicant identified the applicable aging effects
 - (b) the applicant defined the appropriate combination of materials and environments
 - (c) the applicant specified acceptable AMPs
 - (8) A conclusion stating, if applicable, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.
- E. For aging management evaluations that are consistent with the GALL Report, for which further evaluation is recommended, the SER input should include the following:
 - (1) The NMP LRA section containing the applicant's further evaluations of AMRs for which further evaluation is required.
 - (2) A list of the aging effects for which the further evaluation apply.
 - (3) For the applicant's further evaluations, provide a summary of the basis for concluding that it satisfied the criteria of Section 3.X.3.2 of the SRP-LR.
 - (4) A statement that the staff audited the applicant's further evaluations against the criteria contained in Section 3.X.3.2 of the SRP-LR.
 - (5) A statement that the audit and review report contains additional information. Also identify the issue date and the ADAMS accession number for the audit and review report.

⁹ The audit results documented in this section address the AMRs consistent with the GALL Report for which no further evaluation is recommended.

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- F. Staff AMR Review Results.¹⁰ This section of the SER input documents the reviews of AMRs assigned to the project team that are not consistent with the GALL Report. The audit report should document the following, based on a precedent identified by the applicant:
- (1) The NMP LRA section reviewed.
 - (2) A summary of the type of information provided in the section of the NMP LRA, reviewed, including a listing of the AMPs reviewed for this NMP LRA section.
 - (3) Identify the NMP LRA Tables 3.X.2.A-Y or Tables 3.X.2.B-Y documented by this audit write-up.
 - (4) A brief summary of what the staff (project team) reviewed, i.e., NMP LRA and applicant basis documents and other implementation documents.
 - (5) A finding that verifies, if true, that:
 - (a) The applicant identified the applicable aging effects
 - (b) The applicant listed the appropriate combination of materials and environments
 - (c) The applicant specified acceptable AMPs
 - (6) Provide a conclusion stating, if applicable, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.

6.5 Documents Reviewed and Document Retention

Any documents reviewed that were used to formulate the basis for resolution of an issue, such as the basis for a technical resolution, the basis for the acceptance of an exception or an enhancement, etc., should be documented as a reference in the audit and review report.

Upon issuance of the audit and review report, all worksheets that were completed by contractor and NRC personnel shall be given to the NRC project team leader.

After the NRC has made its licensing decision, all copies of documents collected and all documents generated to complete the audit and review report, such as audit worksheets, question and answer tracking documentation, etc., are to be discarded.

¹⁰ This section documents reviews of AMRs assigned to the project team that are not consistent with the GALL Report.

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Table 1. Aging Management Program Element Descriptions

Element		Description
1	Scope of the program	The scope of the program should include the specific structures and components subject to an aging management review.
2	Preventive actions	Preventive actions should mitigate or prevent the applicable aging effects.
3	Parameters monitored or inspected	Parameters monitored or inspected should be linked to the effects of aging on the intended functions of the particular structure and component.
4	Detection of aging effects	Detection of aging effects should occur before there is loss of any structure and component intended function. This includes aspects such as method or technique (i.e., visual, volumetric, surface inspection), frequency, sample size, data collection and timing of new/one-time inspections to ensure timely detection of aging effects.
5	Monitoring and trending	Monitoring and trending should provide prediction of the extent of the effects of aging and timely corrective or mitigative actions.
6	Acceptance criteria	Acceptance criteria, against which the need for corrective action will be evaluated, should ensure that the particular structure and component intended functions are maintained under all current licensing basis design conditions during the period of extended operation.
7	Corrective actions	Corrective actions, including root cause determination and prevention of recurrence, should be timely.
8	Confirmation process	The confirmation process should ensure that preventive actions are adequate and appropriate corrective actions have been completed and are effective.
9	Administrative controls	Administrative controls should provide a formal review and approval process.
10	Operating experience	Operating experience involving the aging management program, including past corrective actions resulting in program enhancements or additional programs, should provide objective evidence to support a determination that the effects of aging will be adequately managed so that the structure and component intended functions will be maintained during the period of extended operation.

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Table 2. Notes for License Renewal Application Tables 3.X.2.A-Y¹¹ and 3.X.2.B-Y

Note	Description
A	Consistent with NUREG-1801 [GALL Report] item for component, material, environment, and aging effect. AMP is consistent with NUREG-1801 AMP.
B	Consistent with NUREG-1801 item for component, material, environment, and aging effect. AMP takes some exceptions to NUREG-1801 AMP.
C	Component is different, but consistent with NUREG-1801 item for material, environment, and aging effect. AMP is consistent with NUREG-1801 AMP.
D	Component is different, but consistent with NUREG-1801 item for material, environment, and aging effect. AMP takes some exceptions to NUREG-1801 AMP.
E	Consistent with NUREG-1801 for material, environment, and aging effect, but a different aging management program is credited.
F	Material not in NUREG-1801 for this component.
G	Environment not in NUREG-1801 for this component and material.
H	Aging effect not in NUREG-1801 for this component, material and environment combination.
I	Aging effect in NUREG-1801 for this component, material and environment combination is not applicable.
J	Neither the component nor the material and environment combination is evaluated in NUREG-1801.
K	Material and environment not in NUREG-1801 for this component and aging effect.
L	Aging effect and environment not in NUREG-1801 for this component and material.
M	Aging effect and material not in NUREG-1801 for this component and environment.
N	Aging effect, material, and environment not in NUREG-1801 for this component.

¹¹ Each AMR line item is coded with a letter which represents a standard note designation based on a letter from A. Nelson, NEI, to P.T. Kuo, NRC, "U.S. Nuclear Industry's Proposed Standard License Renewal Application Format Package, Request NRC Concurrence," dated January 24, 2003 (ML030290201). The staff concurred in the format of the standardized format for license renewal applications by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

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Note	Description
P	Component and aging effect not in NUREG-1801 for this material and environment.
Q	Component not in NUREG-1801 for this material, environment, and aging effect.

(Note “O” was not used to avoid confusion with the number zero.)

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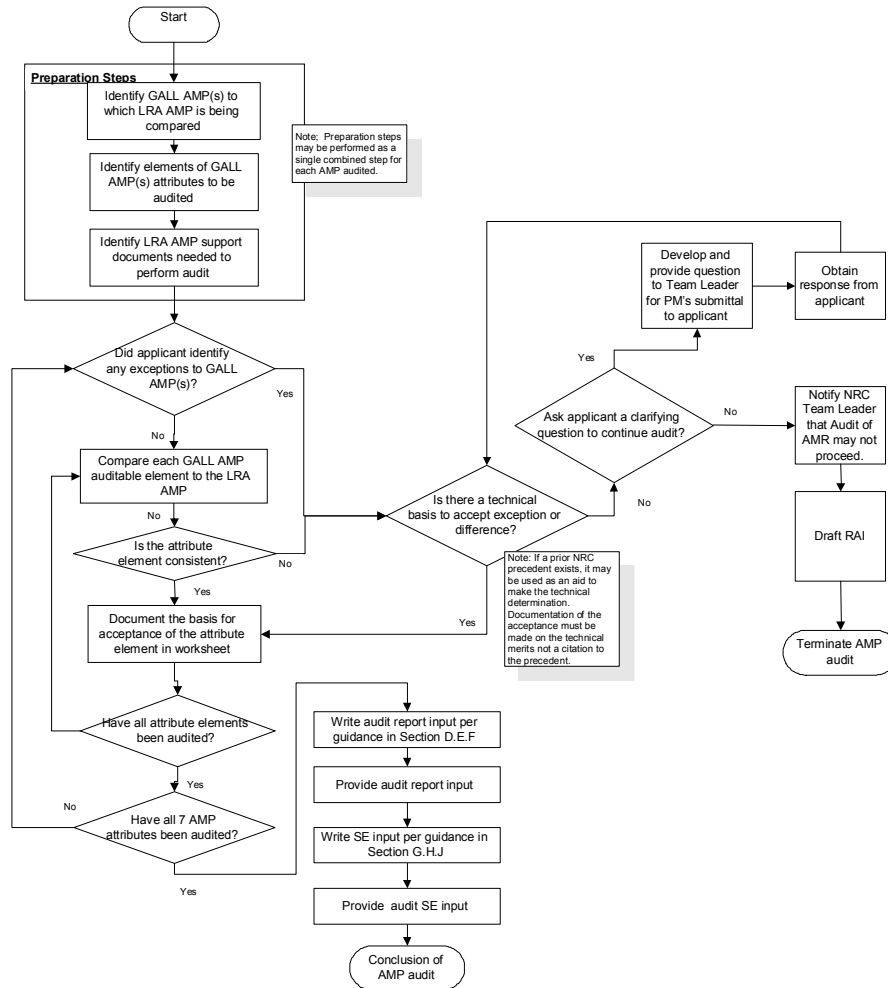


Figure 1. Audit of AMPs That Are Consistent With the GALL Report

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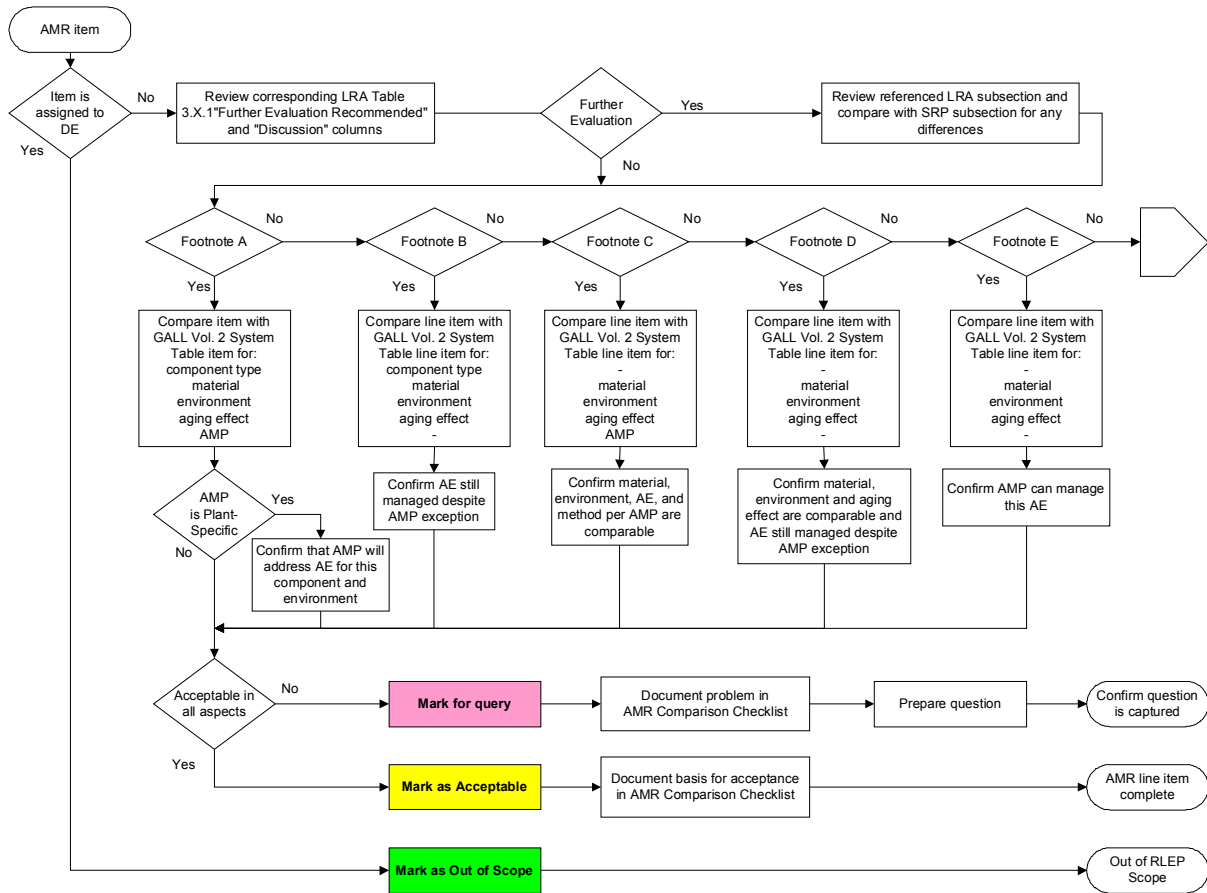


Figure 2. Review of AMRs That Are Consistent With the GALL Report

Appendix A

Project Team Members

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Appendix A

Project Team Members

Organization	Name	Function
NRC/NRR/DRIP/RLEP-B	K. Chang	Project team leader
NRC/NRR/DRIP/RLEP-B	K. Hsu	Backup project team leader
NRC/NRR/DRIP/RLEP-B	P. Wen	Reviewer
NRC/NRR/DE	D. Nguyen	Reviewer
NRC/NRR/DIPM/IROB	T. Le	Reviewer
NRC/NRR/DRIP/RLEP-B	S. Ng	Reviewer
Information Systems Laboratories, Inc.	M. Kennedy	Contractor lead, reviewer
Information Systems Laboratories, Inc.	M. Patterson	Reviewer
Information Systems Laboratories, Inc.	F. Saba	Reviewer
Information Systems Laboratories, Inc.	J. Woodfield	Reviewer

Appendix B

RLEP-B Schedule for NMP LRA Safety Review

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Appendix B

RLEP-B Schedule for NMP LRA Safety Review

Plant: Nine Mile Point

TAC Number: MC3272, MC3273

Project team Leader: Kenneth Chang

Backup Project team Leader: Kaihwa Hsu

Project Manager: Tommy Le

Contractor: Information Systems Laboratories

Activity/Milestone		Scheduled Completion
1	Receive license renewal application	05/27/2004
2	Make review assignments (project manager)	07/09/2004
3	Training for project team members	N/A
4	Hold project team planning (kick-off) meeting	08/05/2004
5	Issue audit plan to project manager	08/02/2004
6	Conduct first site visit (AMP reviews)	08/09-13/2004
7	Draft AMP audit report input (project team members)	08/20/2004
8	Draft SER input for AMP reviews (project team members)	08/23-27/2004
9	Conduct in-office AMR reviews	08/30-09/10/2004
10	Conduct second site visit (resolve AMP and AMR questions)	09/13-09/17/2004
11	Draft AMR audit report input (project team members)	10/8/2004
12	Draft SER input for AMR reviews (project team members)	10/8/2004
13	Conduct third site visit (resolve outstanding issues and questions)	10/10/20-21/2004
14	Conduct public exit meeting	10/21/2004
15	Conduct writing session for audit and review report and SER input	11/05/2004
16	Cutoff for providing RAIs to project manger	11/05/2004
17	Final audit and review report (AMP and AMR sections)	11/30/2004
18	Final input for draft SER with open items	12/10/2004

Appendix C

Aging Management Program Assignments

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Appendix C

Aging Management Program Assignments

The following AMPs have been assigned to the project team for review.

NMP LRA AMP Number	GALL Report AMP Number	AMP Title	Consistent with GALL Report		Assigned Reviewer
			Yes	No	
B2.1.1	XI.M1	ASME Section XI Inservice Inspection (Subsections IWB, IWC, IWD) Program	X		HSU
B2.1.2	XI.M2	Water Chemistry Control Program	X		SABA
B2.1.3	XI.M3	Reactor Head Closure Studs Program	X		PATTERSON
B2.1.4	XI.M4	The BWR Vessel ID Attachment Welds Program	Yes		HSU
B2.1.5	XI.M5	BWR Feedwater Nozzle Program	X		PATTERSON
B2.1.6	XI.M7	BWR Stress Corrosion Cracking Program	X		HSU
B2.1.7	XI.M8	The BWR Penetrations Program	Yes		HSU
B2.1.8	XI.M9	BWR Vessel Internals Program	Yes		HSU
B2.1.9	XI.M17	Flow-Accelerated Corrosion Program	Yes		WEN
B2.1.10	XI.M20	Open-Cycle Cooling Water System Program	Yes		KENNEDY
B2.1.11	XI.M21	Closed-Cycle Cooling Water System Program	X		KENNEDY
B2.1.12	XI.M22	Boraflex Monitoring Program	X		WEN
B2.1.13	XI.M23	Inspection of Overhead Heavy Load and Light Load Handling Systems Program	X		WOODFIELD
B2.1.14	XI.M24	Compressed Air Monitoring Program (NMP1 only)	X		WEN
B2.1.15	XI.M25	BWR Reactor Water Cleanup System Program	X		SABA
B2.1.16	XI.M26	Fire Protection Program	Yes		LE
B2.1.17	XI.M27	Fire Water System Program	X		LE
B2.1.18	XI.M30	Fuel Oil Chemistry Program	X		SABA
B2.1.19	XI.M31	Reactor Vessel Surveillance Program	X		DE

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NMP LRA AMP Number	GALL Report AMP Number	AMP Title	Consistent with GALL Report		Assigned Reviewer
			Yes	No	
B2.1.20	XI.M32	One-Time Inspection Program	Yes		PATTERSON
B2.1.21	XI.M33	Selective Leaching of Materials Program	Yes		PATTERSON
B2.1.22	XI.M34	Buried Piping and Tanks Inspection Program	Yes		SABA
B2.1.23	XI.S1	ASME Section XI Inservice Inspection (Subsection IWE) Program	X		WOODFIELD
B2.1.24	XI.S2	ASME Section XI Inservice Inspection (Subsection IWL) Program	X		WOODFIELD
B2.1.25	XI.S3	ASME Section XI Inservice Inspection (Subsection IWF) Program	X		WOODFIELD
B2.1.26	XI.S4	10 CFR 50 Appendix J Program	X		WEN
B2.1.27	XI.S5	Masonry Wall Program	X		WOODFIELD
B2.1.28	XI.S6	Structures Monitoring Program	X		WOODFIELD
B2.1.29	XI.E1	Non-EQ Electrical Cables and Connections Program	Yes		NGUYEN
B2.1.30	XI.E2	Non-EQ Electrical Cables Used in Instrumentation Circuits Program	X		NGUYEN
B2.1.31	XI.E3	Non-EQ Inaccessible Medium Voltage Cables Program	Yes		NGUYEN
B2.1.32	NA	Preventive Maintenance Program	PS		DE
B2.1.33	NA	System Walkdown Program	PS		DE
B2.1.34	NA	Non-Segregated Bus Inspection Program	PS		DE
B2.1.35	NA	Fuse Holder Inspection Program	PS		DE
B3.1	X.E1	Environmental Qualification Program	Yes		NGUYEN
B3.2	X.M1	Fatigue Monitoring Program	X		PATTERSON
B3.3	NA	Torus Corrosion Monitoring Program (NMP1 Only)	PS		DE
DE = Division of Engineering PS = plant specific X = with exceptions					

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Appendix D

Aging Management Review Assignments

NOTE: The work-split table is incorporated by reference (ADAMS accession number ML042450123).

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Appendix D

Aging Management Review Assignments

Aging Management Reviews	Reviewer
3.1 Aging Management of Reactor Vessel, Internals, and Reactor Coolant System	K. Hsu
3.1.2.A NMP1 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.1.2.A.1 NMP1 Reactor Pressure Vessel	K. Hsu
3.1.2.A.2 NMP1 Reactor Pressure Vessel Internals	K. Hsu
3.1.2.A.3 NMP1 Reactor Pressure Vessel Instrumentation System	K. Hsu
3.1.2.A.4 NMP1 Reactor Recirculation System	K. Hsu
3.1.2.A.5 NMP1 Control Rod Drive System	K. Hsu
3.1.2.B NMP2 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.1.2.B.1 NMP2 Reactor Pressure Vessel	K. Hsu
3.1.2.B.2 NMP2 Reactor Pressure Vessel Internals	K. Hsu
3.1.2.B.3 NMP2 Reactor Pressure Vessel Instrumentation System	K. Hsu
3.1.2.B.4 NMP2 Reactor Recirculation System	K. Hsu
3.1.2.B.5 NMP2 Control Rod Drive System	K. Hsu
3.2 Aging Management of Engineered Safety Features	M. Patterson
3.2.2.A NMP1 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.2.2.A.1 NMP1 Containment Spray System	M. Patterson
3.2.2.A.2 NMP1 Core Spray System	M. Patterson
3.2.2.A.3 NMP1 Emergency Cooling System	M. Patterson
3.2.2.B NMP2 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.2.2.B.1 NMP2 Hydrogen Recombiner System	M. Patterson
3.2.2.B.2 NMP2 High Pressure Core Spray System	M. Patterson
3.2.2.B.3 NMP2 Low Pressure Core Spray System	M. Patterson
3.2.2.B.4 NMP2 Reactor Core Isolation Cooling System	M. Patterson

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Aging Management Reviews	Reviewer
3.2.2.B.5 NMP2 Residual Heat Removal System	M. Patterson
3.2.2.B.6 NMP2 Standby Gas Treatment System	M. Patterson
3.3 Aging Management of Auxiliary Systems	M. Kennedy
Table 3.1.1.A NMP1 Summary of Aging Management Programs for the Reactor Vessel, Internals, and Reactor Coolant Systems (where applicable to components of auxiliary systems)	F. Saba
Table 3.2.1.A NMP1 Summary of Aging Management Programs for the Engineered Safety Features (where applicable to components of auxiliary systems)	M. Kennedy
Table 3.3.1.A NMP1 Summary of Aging Management Programs for the Auxiliary Systems	
All Items in Table 3.3.2.A-7	D. Nguyen
Items 3.3.1.A-01 through -14	F. Saba
Items 3.3.1.A-15 through -20	M. Kennedy
Items 3.3.1.A-21 through -27	F. Saba
Items 3.3.1.A-28 through - 30	M. Kennedy
Table 3.1.1.B NMP2 Summary of Aging Management Programs for the Reactor Vessel, Internals, and Reactor Coolant Systems (where applicable to components of auxiliary systems)	F. Saba
Table 3.2.1.B NMP2 Summary of Aging Management Programs for the Engineered Safety Features (where applicable to components of auxiliary systems)	M. Kennedy
Table 3.3.1.B NMP2 Summary of Aging Management Programs for the Auxiliary Systems	
All Items in Table 3.3.2.B-13	N. Le
All Items in Table 3.3.2.B-29	D. Nguyen
Items 3.3.1.B-01 through -14	F. Saba
Items 3.3.1.B-15 through -20	M. Kennedy
Items 3.3.1.B-21 through 27	F. Saba
Items 3.3.1.B-28 through -30	M. Kennedy
3.4 Aging Management of Steam and Power Conversion Systems	P. Wen
3.4.2.A NMP1 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	

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Aging Management Reviews	Reviewer
3.4.2.A.1 NMP1 Condensate System	P. Wen
3.4.2.A.2 NMP1 Feedwater/High Pressure Coolant Injection System	P. Wen
3.4.2.A.3 NMP1 Main Generator And Auxiliary System	P. Wen
3.4.2.A.4 NMP1 Main Steam System	P. Wen
3.4.2.B NMP2 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.4.2.B.1 NMP2 Main Condenser Air Removal System	P. Wen
3.4.2.B.2 NMP2 Condensate System	P. Wen
3.4.2.B.3 NMP2 Feedwater System	P. Wen
3.4.2.B.4 NMP2 Main Steam System	P. Wen
3.4.2.B.5 NMP2 Moisture Separator and Reheater System	P. Wen
3.5 Aging Management of Containment, Structures, and Component Supports	J. Woodfield
3.5.2.A NMP1 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.5.2.A.1 NMP1 Primary Containment Structure	J. Woodfield
3.5.2.A.2 NMP1 Reactor Building	J. Woodfield
3.5.2.A.3 NMP1 Essential Yard Structures	J. Woodfield
3.5.2.A.4 NMP1 Fuel Handling System	J. Woodfield
3.5.2.A.5 NMP1 Material Handling System	J. Woodfield
3.5.2.A.6 NMP1 Offgas Building	J. Woodfield
3.5.2.A.7 NMP1 Radwaste Solidification and Storage Building	J. Woodfield
3.5.2.A.8 NMP1 Screen and Pump House Building	J. Woodfield
3.5.2.A.9 NMP1 Turbine Building	J. Woodfield
3.5.2.A.10 NMP1 Vent Stack	J. Woodfield
3.5.2.A.11 NMP1 Waste Disposal Building	J. Woodfield
3.5.2.B NMP2 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	

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Aging Management Reviews	Reviewer
3.5.2.B.1 NMP2 Primary Containment Structure	J. Woodfield
3.5.2.B.2 NMP2 Reactor Building	J. Woodfield
3.5.2.B.3 NMP2 Auxiliary Service Building	J. Woodfield
3.5.2.B.4 NMP2 Control Room Building	J. Woodfield
3.5.2.B.5 NMP2 Diesel Generator Building	J. Woodfield
3.5.2.B.6 NMP2 Essential Yard Structures	J. Woodfield
3.5.2.B.7 NMP2 Fuel Handling System	J. Woodfield
3.5.2.B.8 NMP2 Main Stack	J. Woodfield
3.5.2.B.9 NMP2 Material Handling System	J. Woodfield
3.5.2.B.10 NMP2 Radwaste Building	J. Woodfield
3.5.2.B.11 NMP2 Screenwell Building	J. Woodfield
3.5.2.B.12 NMP2 Standby Gas Treatment Building	J. Woodfield
3.5.2.B.13 NMP2 Turbine Building	J. Woodfield
3.5.2.C Commodity Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	
3.5.2.C.1 Component Supports	J. Woodfield
3.5.2.C.2 Fire Stops And Seals	J. Woodfield
3.6 Aging Management of Electrical and Instrumentation and Controls	D. Nguyen
3.6.2.1 Materials, Environments, Aging Effects Requiring Management and Aging Management Programs	D. Nguyen

The specific AMR review assignments are shown on the work split tables. The results of those evaluations will be documented in Section 3 of the NMP SER which are based on the NMP LRA Tables 3.X.2.A-Y and 3.X.2.B-Y. These tables have been incorporated into Appendix D by reference (see ADAMS Accession number MLXXXXX).

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Appendix E

Consistent with GALL Report AMP Audit/Review Worksheet

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Appendix E

Consistent with GALL Report AMP Audit/Review Worksheet

The worksheet provided in this appendix provides, as an aid for the reviewer, a process for documenting the basis for the assessment of the elements and sub-elements contained in the GALL Report AMPs (Chapter XI of NUREG-1801, Volume 2). This worksheet provides a systematic method for recording the basis for assessments or to identify when the applicant needs to provide clarification or additional information. Information recorded in the worksheets will also be used to prepare the audit and review report and the safety evaluation report input.

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Consistent with GALL Report AMP Audit/Review Worksheet

NMP LRA Appendix Subsection:	NMP AMP Title:
GALL Report Subsection:	GALL Report Title:

A. Element Review and Audit

Program Description:

9 Consistent with GALL Report 9 Difference Identified

Discussion:

1. Scope of Program:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

2. Preventive Action:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

3. Parameters Monitored/Inspected:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

4. Detection of Aging Effects:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

5. Monitoring and Trending:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

6. Acceptance Criteria:

9 Consistent with GALL Report 9 Exception 9 Enhancement 9 Difference Identified

Discussion:

7. Corrective Action: *To be performed by DIPM*

8. Confirmation Process: *To be performed by DIPM*

9. Administrative Controls: *To be performed by DIPM*

10. Operating Experience:

B. FSAR supplement review: *(Include any commitments.)*

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C. Remarks and questions:

D. References/documents used: *(Include number designation, full title, revision number, date, and page numbers, and ADAMS accession number.)*

E. Applicant contact:

Project team member: _____ **Date:** _____

Appendix F

Aging Management Review Worksheets

Nine Mile Point Audit & Review Plan - DRAFT

NMP AMR Component (Table 1) Worksheet		Audit Date:
Unit:	Table No.:	Chapter:
Auditor Name(s) :		

The project team verified that items in Table 3.x.1 (Table 1) correspond to items in the GALL Volume 1, Table X. All items applicable to BWRs in Table 1 were reviewed and are addressed in the following table.

Item No.	Further Evaluation Recommended	Discussion

Audit Remarks (Document all questions for the applicant here):

No.	Question for applicant (draft per RAI guidance)	Response (with date)

References/Documents Used:

- 1.
- 2.
- 3.
- 4.

Appendix G

Acronyms, Abbreviations, and Initialisms

Appendix G

Acronyms, Abbreviations, and Initialisms

ADAMS	Agencywide Documents Access and Management System
AMP	aging management program
AMR	aging management review
ASME	American Society of Mechanical Engineers
CLB	current licensing basis
DE	Division of Engineering
DIPM	Division of Inspection Program Management
FSAR	final safety analysis report
GALL	Generic Aging Lessons Learned
ISG	Interim Staff Guidance
LRA	license renewal application
NEI	Nuclear Energy Institute
NMP	Nine Mile Point
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
RAI	request for additional information
RLEP-B	License Renewal and Environmental Impacts Program, Section B
RLSB	License Renewal and Standardization Branch
SC	structures and components
SER	safety evaluation report
SRP-LR	Standard Review Plan-License Renewal
SSC	structure, system, and component
UFSAR	updated final safety analysis report